

PATENT ABSTRACTS OF JAPAN

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(21)Application number : 05-268258 (71)Applicant : HINO MOTORS LTD

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(54) FUEL INJECTION DEVICE

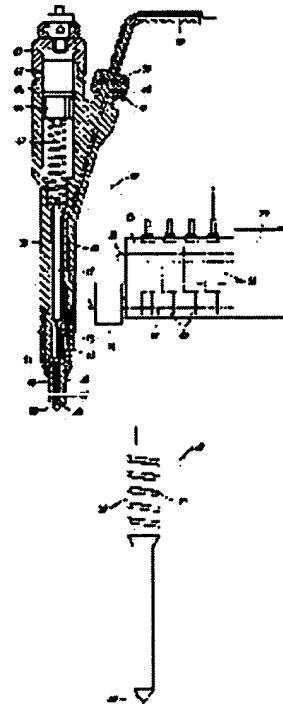
(57)Abstract:

PURPOSE: To move a nozzle needle rapidly in its close direction and also shorten its injection time by forming a recess in the sliding seal surface of the nozzle needle in a fuel injection nozzle to which fuel pressure is applied intermittently by a fuel injection pump so as to reduce sliding friction.

CONSTITUTION: A fuel injection device feeds fuel from a fuel injection pump 25 to a fuel injection nozzle 20.

Also the fuel fed to the fuel injection nozzle 20 passes through passages 42 and 43 and applies pressure to a fuel sump 51. As a result, a nozzle needle 38 rises while compressing a spring 40 through a rod 39 to depart from a valve seat 41 and thus fuel is injected from an injection nozzle 35. On the other hand, the nozzle needle 38

stops fuel injection because the conical part 69 at its tip is pressed against the valve seat 41 by the spring 40. In this case, a recess 71 formed in a spiral groove is provided around the circumference of the sliding seal surface 10 of the nozzle needle 38. Thus the frictional area on the sliding seal surface 70 can be reduced.



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